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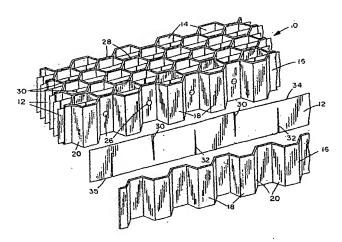
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(54) Title: HONEYCOMB CELL STRUCTURE AND METHOD OF MANUFACTURE



(57) Abstract: A honeycomb cell structure (10) has a plurality of first strips (16) each formed into a generally zig-zag configuration and placed side by side to form a plurality of rows of cells in a generally honeycomb configuration with nodes (28) between adjacent cells in each row, and a plurality of second strips of brazing foil (12). Each second strip is positioned between a respective pair of adjacent first strips and the first and second strips are secured together at each node such that a brazing foil strip extends across each cell in each row of the honeycomb. The second strips have a series of spaced slits (30) extending transversely from at least one side edge across at least a distance equal to greater than half of the width of the second strip, with at least some of the slits being located within the cells.



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### INTERNATIONAL SEARCH REPORT

ini nal Application No PCT/US 01/44176

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 B23K1/00										
According to	According to International Patent Classification (IPC) or to both national classification and IPC									
B. FIELDS SEARCHED										
Minimum documentation searched (classification system followed by classification symbols)  IPC 7 B23K										
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched										
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)  EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX										
C. DOCUME	ENTS CONSIDERED TO BE RELEVANT									
Category °	Citation of document, with indication, where appropriate, of the relevant	Relevant to claim No.								
X	GB 2 117 298 A (ALLOY SPOT WELDERS 12 October 1983 (1983-10-12) page 2, line 77 - line 88; figure		1-4,6-10							
A	EP 0 437 626 A (SHOWA AIRCRAFT IN 24 July 1991 (1991-07-24) abstract	0)	1–12							
А	US 4 491 265 A (ITTNER GARY N ET 1 January 1985 (1985-01-01) cited in the application abstract	AL)	1–12							
Fort	her documents are listed in the continuation of box C.	Y Patent family members are liste	d in annex.							
"A" docum consid "E" earlier filing o "L" docum which citatio "O" docum other	ent defining the general state of the art which is not dered to be of particular relevance document but published on or after the international date ent which may throw doubts on priority claim(s) or is clied to establish the publication date of another or or other special reason (as specified) sent referring to an oral disclosure, use, exhibition or means ent published prior to the international filing date but	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.								
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7	November 2002	26/11/2002								
Name and mailing address of the ISA  European Patent Office, P.B. 5818 Patentlaan 2  NL – 2280 HV Rijswijk  Tel. (+31–70) 340–2040, Tx. 31 651 epo nl,  Fax: (+31–70) 340–3016		Authorized officer  De Backer, T								

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### INTERNATIONAL SEARCH REPORT

ormation on patent family members

Intial Application No
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							31/03 01/441/0
		tent document in search report		Publication date		Patent family member(s)	Publication date
GB	GB	2117298	Α	12-10-1983	DE FR	3218473 A 2526694 A	
	EP	0437626	A	24-07-1991	JP JP JP DE DE US WO	3278815 A 2627668 E 3065244 A 3086370 A 69015605 E 69015605 T 0437626 A 5316997 A 9101876 A	82 09-07-1997 A 20-03-1991 A 11-04-1991 D1 09-02-1995 T2 06-07-1995 A1 24-07-1991 A 31-05-1994
	US	4491265	Α	01-01-1985	FR GB SE	2546788 A 2141064 A 8304431 A	A 12-12-1984

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Form PCT/ISA/210 (patent family annex) (July 1992)

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